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CONTAMINATION ASSESSMENT REPORT ADDENDUM SITE 10 UNDERGROUND STORAGE TANK 136 (UST 136) NAVAL AVIATION DEPOT NAS PENSACOLA FL

11/1/1995

ABB ENVIRONMENTAL SERVICES INC.

CONTAMINATION ASSESSMENT REPORT ADDENDUM

SITE 10, UST 136
NAVAL AVIATION DEPOT

NAVAL AIR STATION
PENSACOLA, FLORIDA

UNIT IDENTIFICATION CODE: N00204
CONTRACT NO.: N62467-89-D-0317/008

NOVEMBER 1995

SOUTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
NORTH CHARLESTON, SOUTH CAROLINA
29419-9010

CONTAMINATION ASSESSMENT REPORT ADDENDUM

SITE 10, UST 136
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NAVAL AIR STATION
PENSACOLA, FLORIDA

Unit Identification Code: N00204

Contract No. N62467-89-D-0317/008

Prepared by:

ABB Environmental Services, Inc.
2590 Executive Center Circle, East
Tallahassee, Florida 32301

Prepared for:

Department of the Navy, Southern Division
Naval Facilities Engineering Command
2155 Eagle Drive
North Charleston, South Carolina 29418

Byas Glover, Code 18410, Engineer-in-Charge

November 1995

CERTIFICATION OF TECHNICAL
DATA CONFORMITY (MAY 1987)

The Contractor, ABB Environmental Services, Inc., hereby certifies that, to the best of its knowledge and belief, the technical data delivered herewith under Contract No. N62467-89-D-0317/008 are complete and accurate and comply with all requirements of this contract.

DATE: November 3, 1995

NAME AND TITLE OF CERTIFYING OFFICIAL: Mark Diblin, P.G.
Task Order Manager

NAME AND TITLE OF CERTIFYING OFFICIAL: Michael J. Williams, P.G.
Project Technical Lead

(DFAR 252.227-7036)

FOREWORD

To meet its mission objectives, the U.S. Navy performs a variety of operations, some requiring the use, handling, storage, or disposal of hazardous materials. Through accidental spills and leaks and conventional methods of past disposal, hazardous materials may have entered the environment in ways unacceptable by today's standards. With growing knowledge of the long-term effects of hazardous materials on the environment, the Department of Defense initiated various programs to investigate and remediate conditions related to suspected past releases of hazardous materials at their facilities.

One of these programs is the Comprehensive Long-Term Environmental Action, Navy Underground Storage Tank (UST) program. This program complies with Subtitle I of the Resource Conservation and Recovery Act and the Hazardous and Solid Waste Amendments of 1984. In addition, the UST program complies with all appropriate State and local storage tank regulations as they pertain to each naval facility.

The UST program includes the following activities:

- registration and management of Navy and Marine Corps storage tank systems,
- contamination assessment planning,
- site field investigations,
- preparation of contamination assessment reports,
- remedial (corrective) action planning,
- implementation of the remedial action plans, and
- tank and pipeline closures.

The Southern Division, Naval Facilities Engineering Command (SOUTHNAVFACENGCOM) manages the UST program, and the U.S. Environmental Protection Agency and the

Florida Department of Environmental Protection (formerly Florida Department of Environmental Regulation) oversee the Navy UST program at Naval Aviation Depot (NADEP) Pensacola.

Questions regarding the UST program at NADEP Pensacola should be addressed to Mr. Byas Glover, SOUTHNAVFACENGCOM, Code 18410, at (803) 743-0651.

ACKNOWLEDGMENTS

In preparing this report, the Underground Storage Tank Section of the Comprehensive Long-Term Environmental Action, Navy Group at ABB Environmental Services, Inc., commends the support, assistance, and cooperation provided by the personnel at Naval Aviation Depot, Naval Air Station, Pensacola, Florida, and Southern Division, Naval Facilities Engineering Command.

EXECUTIVE SUMMARY

This report is an addendum to the Aviation Gasoline (AVGAS) Pipeline Area Contamination Assessment Report (CAR) submitted by ABB Environmental Services, Inc. (ABB-ES), in August 1995. General information such as regional and local physiography, regional hydrology, investigative methodologies, and supplemental reports and memoranda are included in the August 1995 AVGAS Pipeline Area CAR.

Site 10 is the former location of a 500-gallon underground storage tank (UST) located on the southern boundary of Chevalier Field, Naval Aviation Depot Pensacola. The tank, designated UST 136, was located near the northeast corner of Building 607, adjacent to another UST site designated Site 607NE. UST 136 was constructed of unprotected steel and contained a lubricating oil. The UST was installed next to a steel containment area referred to by site personnel as an "oil pit." The purpose of the pit is uncertain, although the suspected usage was to dispense lube oil and air during aircraft maintenance.

During the UST 136 removal in September 1994, corrosion holes were observed in the UST bottom. No confirmatory analytical soil or groundwater samples were collected during removal activities. All excavated soil was returned to the excavation. Site 10, UST 136, was transferred to ABB-ES in late September 1994 for investigation and closure.

Findings.

- Site soil consists of a mixture of fill material and very fine- to fine-grained, well-sorted sand. The sand ranges in color from very light gray to light brown. The fill material consists of cobble-size asphalt, concrete fragments, and broken porcelain artifacts.

- The source of petroleum contamination, UST 136, has been removed.

- Excessively contaminated soil from the tank excavation area was removed. No visual evidence of soil contamination was observed at the base of the excavation or on the excavation walls.

- Eleven confirmatory analytical soil samples were collected from the north, west, and east sides of the UST excavation area. The total recoverable petroleum hydrocarbons concentrations exceeding the State clean soil maximum concentration of 10 parts per million were detected in six soil samples (Florida Department of Environmental Protection, May 1994). The approximate volume of excessively contaminated soil is 270 cubic yards (yd^3). The executive summary figure presents the areal extent of excessively contaminated soil.

- Lead was the only contaminant detected in the groundwater sample collected at Site 10. The lead concentration of 17.9 parts per billion (ppb) detected in sample 10G00101 is below the State target level of 50 ppb listed in Chapter 62-770.730(5)(a), Florida Administrative Code (FAC).

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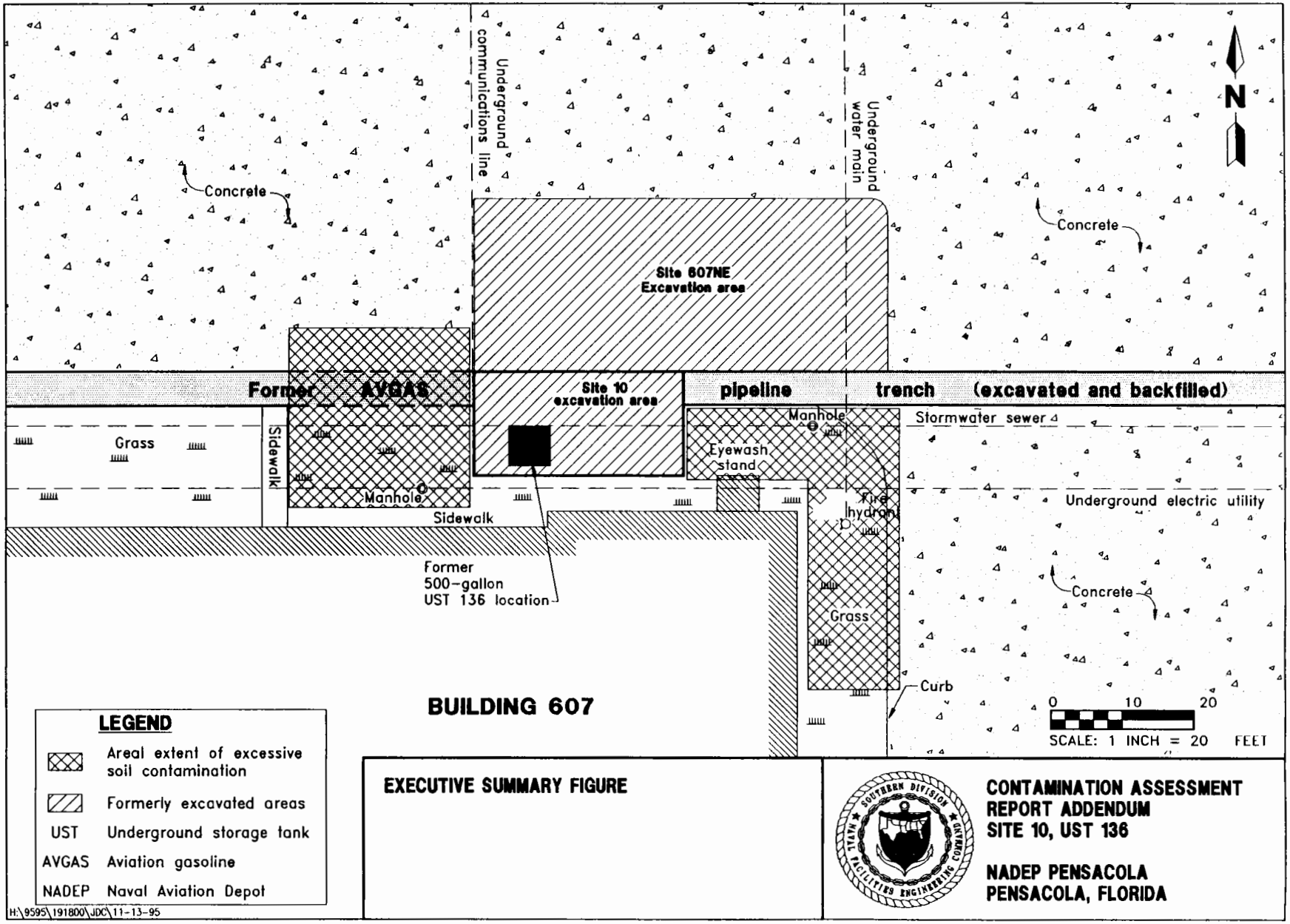

EXECUTIVE SUMMARY FIGURE

CONTAMINATION ASSESSMENT REPORT ADDENDUM
SITE 10, UST 136

NADEP PENSACOLA
PENSACOLA, FLORIDA

Conclusions. Based on the findings of the contamination assessment and site conditions, the following can be concluded.

- Approximately 270 yd^3 of excessively contaminated soil at Site 10 on the west side of the UST excavation must be remediated in accordance with Chapter 62-770.300, FAC.

- The groundwater at Site 10 has not been impacted by the soil contamination detected during this investigation.

Recommendations. Based on the findings, conclusions, and interpretations of the CA, ABB-ES recommends that the excessively contaminated soil be removed. A No Further Action Proposal will be appropriate for Site 10 following the soil removal.

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Pensacola, Florida

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Pensacola, Florida

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GLOSSARY

ABB-ES	ABB Environmental Services, Inc.
AVGAS	aviation gasoline
BEI	Bechtel Environmental, Inc.
bdl	below detection limits
bls	below land surface
BRAC	base realignment and closure
CA	contamination assessment
CAR	Contamination Assessment Report
CompQAP	Comprehensive Quality Assurance Plan
FAC	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
GTES	GT Environmental Services
IRA	initial remedial action
NADEP	Naval Aviation Depot
NFAP	No Further Action proposal
PAH	polynuclear aromatic hydrocarbons
ppb	parts per billion
ppm	parts per million
SOUTHNAV-FACENGCOM	Southern Division Naval Facilities Engineering Command
TRPH	total recoverable petroleum hydrocarbons
UST	underground storage tank
VOA	volatile organic aromatics
yd^3	cubic yard

1.0 SITE BACKGROUND AND DESCRIPTION

Site 10 is located on the southern boundary of Chevalier Field, Naval Aviation Depot (NADEP) Pensacola (Figure 1-1). The site is the former location of a 500-gallon underground storage tank (UST) associated with the Aviation Gasoline (AVGAS) Pipeline Area (Figure 1-2). The tank, designated UST 136, was located on the northeast corner of Building 607. UST 136 was constructed of unprotected steel and contained lubricating oil. It was installed next to a steel containment area referred to by site personnel as an "oil pit." At the time of removal, the "oil pit" contained a variety of piping, valves, and a rubber hose on a steel reel. The purpose of the pit is uncertain, although the suspected usage was to dispense lube oil and air during aircraft maintenance.

Site 10 is adjacent to Site 607NE. Site 607NE is the former location of two USTs which contained waste oil and jet fuel. Site 607NE has undergone soil remediation, and a No Further Action proposal (NFAP) has been accepted by the Florida Deparment of Environmental Protection (FDEP) for that site (ABB Environmental Services, Inc. [ABB-ES], May 1995).

UST 136 was removed in September 1994 by Phoenix Construction Company and their subcontractor, GT Environmental Services, Inc. (GTES). During the tank removal operations, corrosion holes were observed in the UST bottom. No soil or groundwater samples were collected by GTES. All excavated soil was returned to the excavation after UST 136 was removed.

Site 10 UST 136 was transferred to ABB-ES for closure. The closure report for UST 136 is presented in Appendix A of the AVGAS Pipeline Area Contamination Assessment Report (CAR) submitted by ABB-ES in August 1995. A Discharge Reporting Form was filed with the closure report and is included in Appendix A of the August 1995 AVGAS pipeline CAR.

The demolition of Chevalier Field commenced in January 1995. The airfield and many associated facilities are being demolished as part of the Base Realignment and Closure (BRAC) program. A Naval Technical Training Center is being constructed on the former airfield. BRAC construction did not, however, significantly affect the Site 10 field investigation. The maps included in this report present the Site 10 area as it was prior to demolition and construction.

This report summarizes the site-specific data gathered during the Site 10 UST closure and subsequent contamination assessment (CA). General information such as regional and local physiography, regional hydrology, investigative methodologies, and procedures are included in the August 1995 AVGAS Pipeline Area CAR.

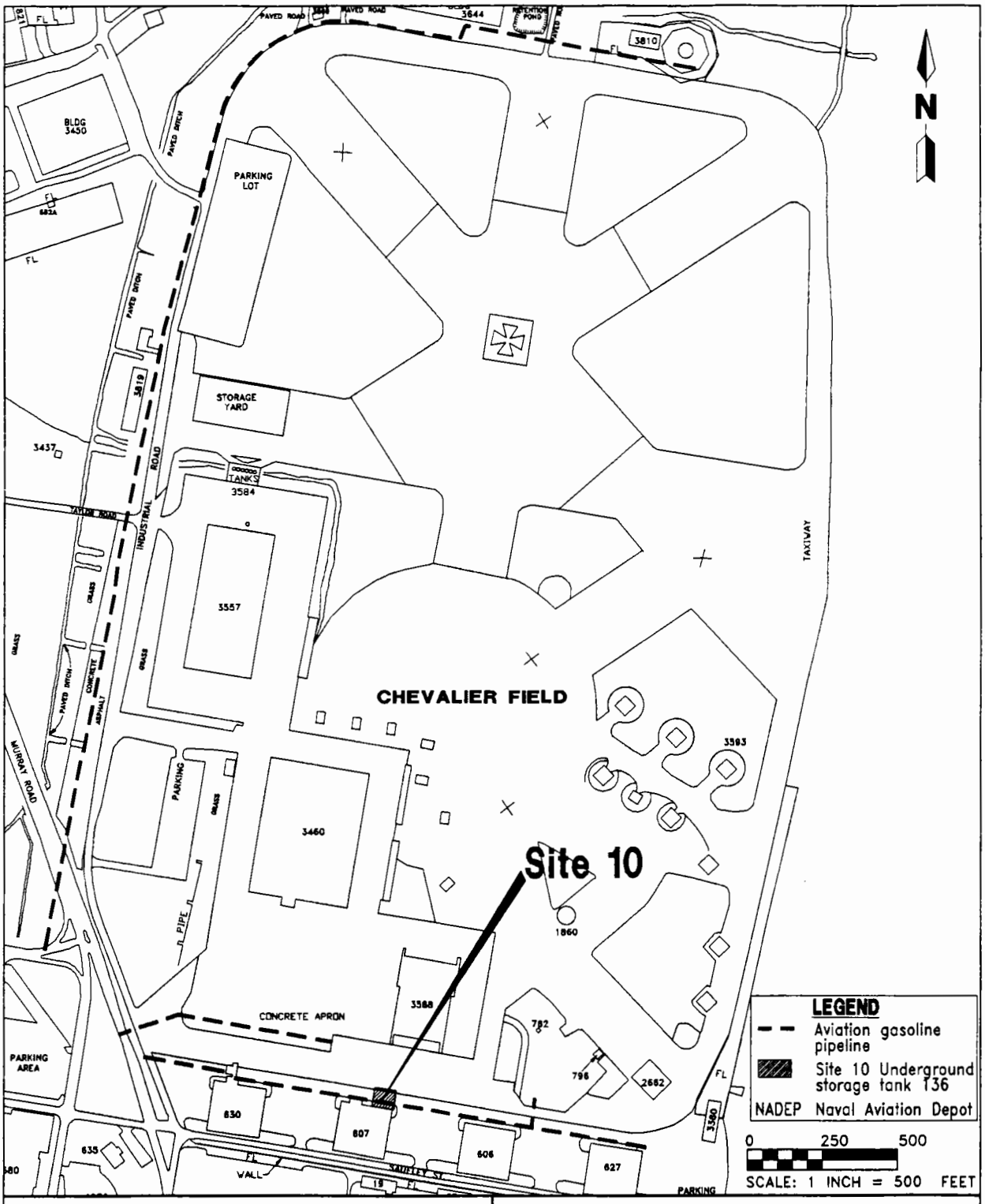

FIGURE 1-1
SITE LOCATION MAP

H:\9595\192100\NAB-NP-JDC\11-13-95

CONTAMINATION ASSESSMENT REPORT ADDENDUM
SITE 10, UST 136

NADEP PENSACOLA
PENSACOLA, FLORIDA

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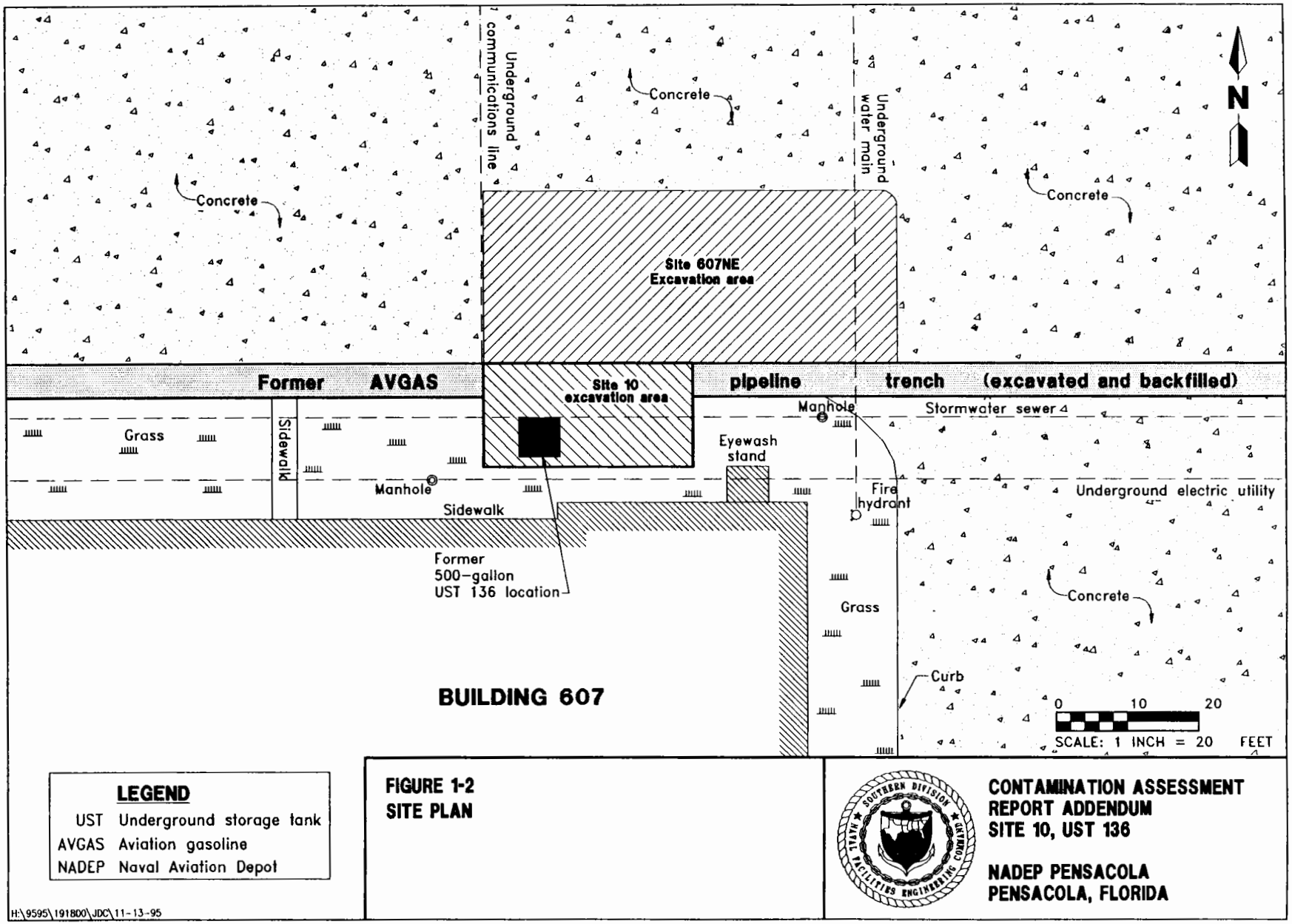

FIGURE 1-2
SITE PLAN

CONTAMINATION ASSESSMENT REPORT ADDENDUM
SITE 10, UST 136

NADEP PENSACOLA
PENSACOLA, FLORIDA

2.0 CONTAMINATION ASSESSMENT RESULTS

2.1 SOIL ASSESSMENT RESULTS. All laboratory soil samples were collected in accordance with ABB-ES's approved Comprehensive Quality Assurance Plan (CompQAP) using a hand-operated auger. Samples were placed in the appropriate containers, labeled, packed in ice, and shipped by overnight carrier to Quanterra Environmental Services in Tampa, Florida, for analysis. Soil boring locations and the initial remedial action (IRA) excavation area are shown on Figure 2-1. Soil contamination distribution is presented on Figure 2-2. Soil sampling analytical results are summarized in Table 2-1. Soil laboratory data sheets are presented in Appendix C of this report.

2.1.1 Initial Soil Assessment On October 26, 1994, one composite soil sample, 10B00101, was collected from the soil returned to the Site 10 excavation area. This sample was composited from soil collected at each corner and the center of the UST excavation area from 2.5 to 3.0 feet below land surface (bls). The composite sample was analyzed for the used oil group analytical parameters defined in Chapter 62-770.600(8)(c), Florida Administrative Code (FAC) and compared to the clean soil criteria described in Chapter 62-775.400, FAC.

Volatile organic aromatics (VOA) concentrations were below method detection limits for soil sample 10B00101. A total polynuclear aromatic hydrocarbons (PAH) concentration of 3,300 parts per billion (ppb) was detected. A total recoverable petroleum hydrocarbons (TRPH) concentration of 31.4 parts per million (ppm) was detected. Because PAH concentrations were greater than 1,000 ppb, a TRPH clean soil maximum concentration of 10 ppm was applied to this site (Chapter 62-775.400, FAC). Cadmium, chromium, arsenic, and lead concentrations were below their respective State clean soil maximum concentrations.

On March 2, 1995, excessively contaminated soil from the former location of UST 136 was removed by Bechtel Environmental, Inc. (BEI). The excavation area is shown on Figure 2-1. Approximately 75 cubic yards (yd^3) of soil were removed from an area 30 feet by 15 feet. Excavation continued until the water table was reached at 4.5 feet bls. The soil removed from the site consisted of very fine- to fine-grained, poor- to well-sorted sand, ranging in color from very light gray to light brown. The first 2 to 3 feet of sand was often mixed with asphalt, concrete, and broken porcelain dishes. ABB-ES personnel present during the excavation reported no stained soil or other visual evidence of contamination on the walls of the excavation. The Site 10 soil was stockpiled with soil excavated from other lube-oil USTs during BEI excavation activities at Chevalier Field. In May 1995, the stockpiled soil was removed from the base and taken to an incineration facility for thermal treatment. The soil transportation manifests and receipts are included in the appendices of the AVGAS Pipeline Area CAR submitted to FDEP in August 1995.

2.1.2 Confirmatory Soil Assessment On March 13, 1995, three confirmatory soil samples, 10B00202 through 10B00402, were collected from the west, south, and east sides respectively of the Site 10, UST 136, excavation area. A soil sample was not collected from the north side of the excavation because it was adjacent to the Site 607NE excavation area. The Site 607NE excavation was backfilled with clean fill material after excessively contaminated soil was removed from the site. A CAR for Site 607 was submitted to FDEP for approval in May 1995. Data collected from soil borings at Site 607NE are included in Table 2-2.

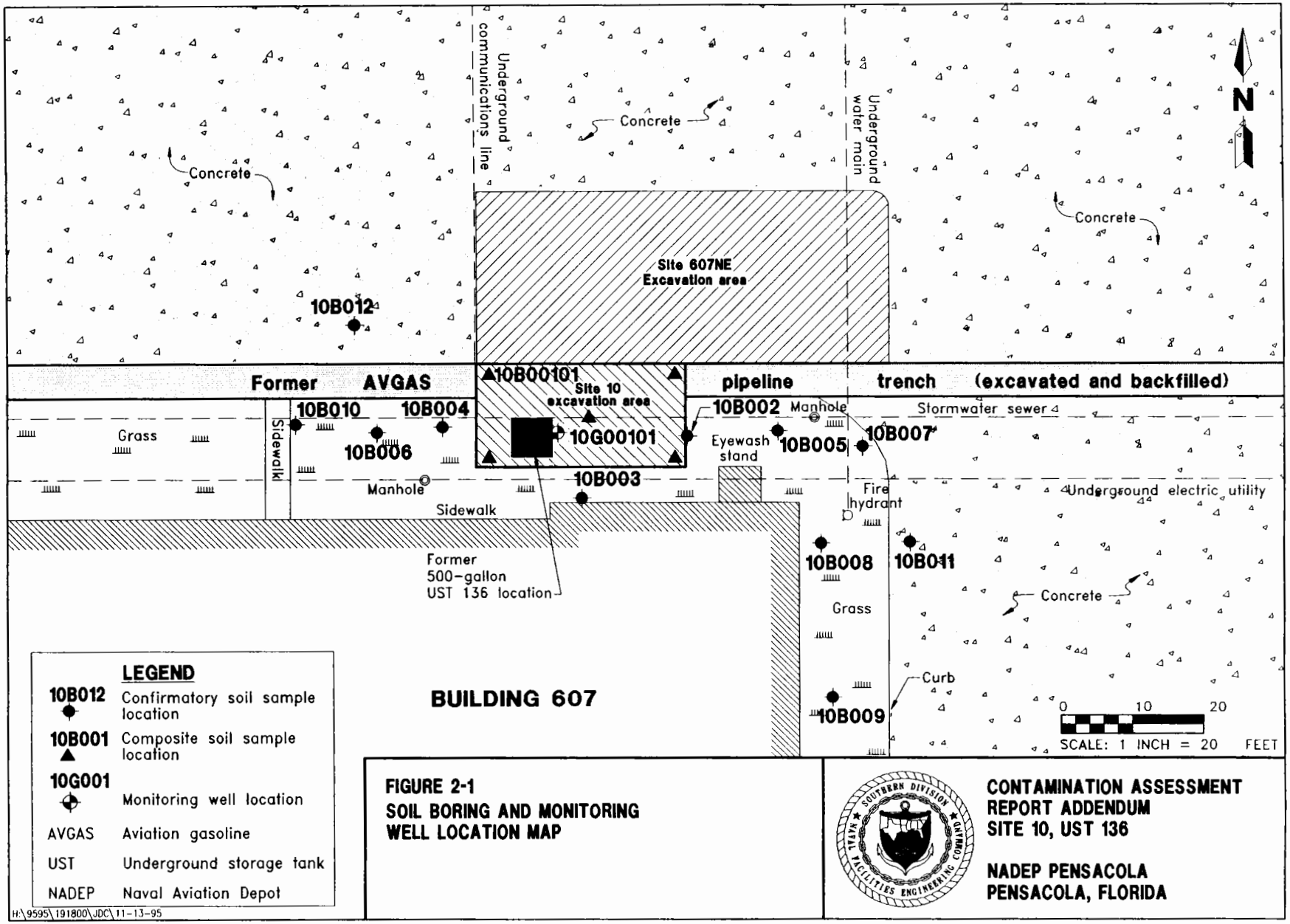

FIGURE 2-1
SOIL BORING AND MONITORING WELL LOCATION MAP

CONTAMINATION ASSESSMENT REPORT ADDENDUM
SITE 10, UST 136

NADEP PENSACOLA
PENSACOLA, FLORIDA

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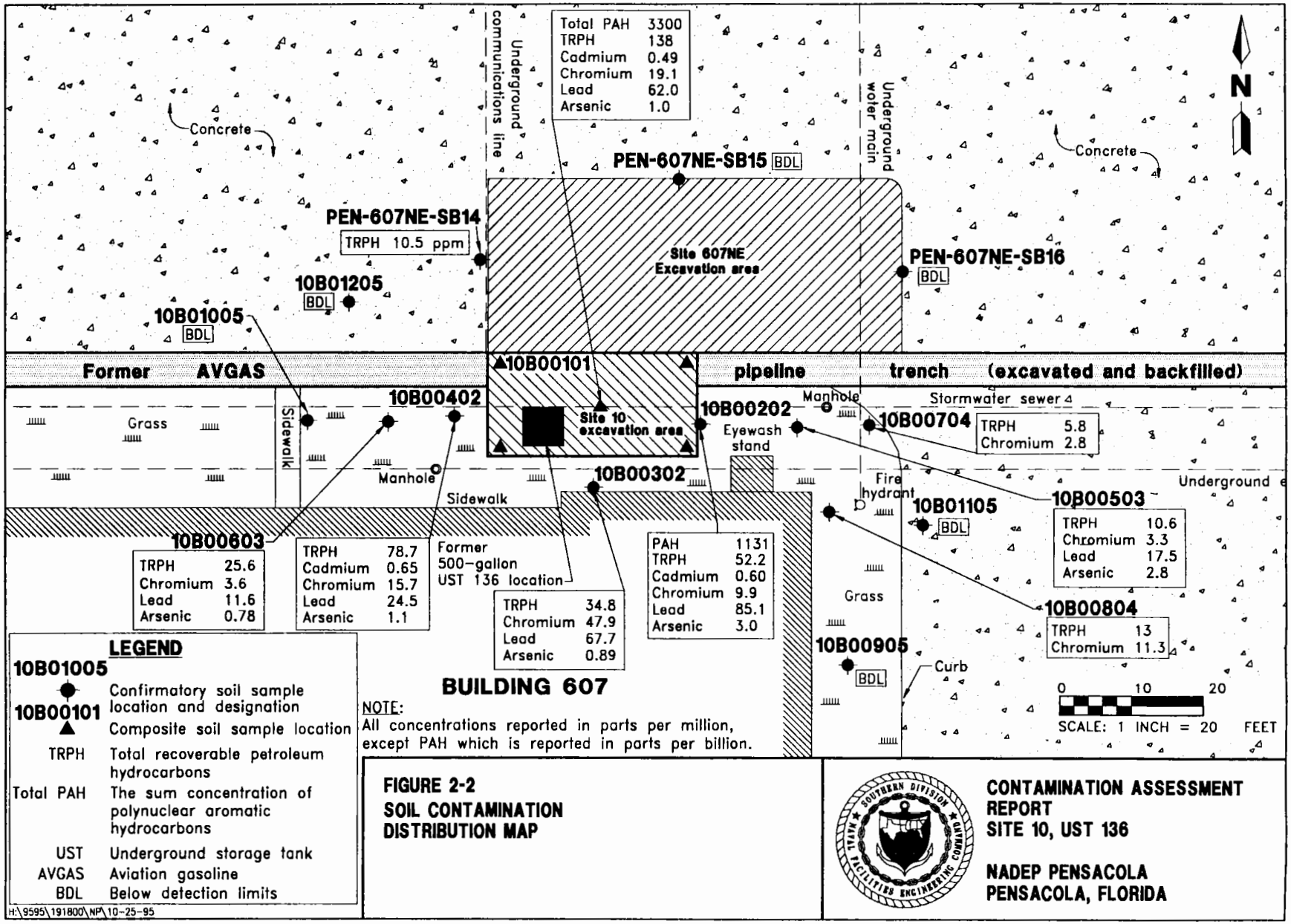

FIGURE 2-2
SOIL CONTAMINATION DISTRIBUTION MAP

CONTAMINATION ASSESSMENT REPORT
SITE 10, UST 136

NADEP PENSACOLA
PENSACOLA, FLORIDA

Table 2-1
Summary of Soil Sample Analytical Results, October 1994 through June 1995

Contamination Assessment Report Addendum
Site 10, UST 136, Naval Aviation Depot
Pensacola, Florida

Contaminant	Soil Sample Designation							Clean Soil[1] Maximum Concentration
	[2]10B00101	[3]10B00202	10B00302	10B00402	10B00503	[3]10B00603	10B00704	
Volatile Organic Aromatics (VOA). Reported in parts per billion (ppb).								
Total VOA	bdl	NS	NS	NS	NS	NS	NS	100
Polynuclear Aromatic Hydrocarbons (PAH). Reported in ppb.								
Total PAH	3,300 J	1,131	NS	NS	NS	NS	NS	1000
Total Recoverable Petroleum Hydrocarbons (TRPH). Reported in parts per million (ppm).								
TRPH	138	52.2	34.8	78.7	10.6	25.6	5.8	10
Total Metals. Reported in milligrams per kilogram (mg/kg).								
Cadmium	0.49 J	0.60	1.5	0.65	<0.53	<0.52	<0.52	37
Chromium	19.1	9.9	47.9	15.7	3.3	3.6	<2.6	50
Lead	62.0	85.1	67.7	24.5	17.5	11.6	2.8	108
Arsenic	1.0	3.0	0.89	1.1	2.8	0.78	<0.26	10

See notes at end of table.

Table 2-1 (Continued)
Summary of Soil Sample Analytical Results,
October 1994 through June 1995

Contamination Assessment Report Addendum
Site 10, UST 136, Naval Aviation Depot
Pensacola, Florida

Contaminant	Soil Sample Designation								Clean Soil[1] Maximum Concentration
	10B00804	10B00905	10B01005	[3]10B01105	10B01205	PEN-607NE-SB14[4]	[4]PEN-607NE-SB15	PEN-607NE-SB16[4]	
TRPH. Reported in ppm.									
TRPH	13	<5.2	<5.2	<5.2	<5.1	10.5	<5.2	<5.2	10
Total Metals. Reported in mg/kg.									
Cadmium	<0.52	NS	NS	NS	NS	NS	NS	NS	37
Chromium	<2.6	NS	NS	NS	NS	NS	NS	NS	50
Lead	11.3	NS	NS	NS	NS	NS	NS	NS	108
Arsenic	<0.26	NS	NS	NS	NS	NS	NS	NS	10

[1] Chapter 62-775.400, Florida Administrative Code.
[2] Mistakenly designated 10B00701 in previous reports. This sample was collected from the source area prior to soil removal.
[3] The highest concentration detected in a sample or its duplicate is reported in this column.
[4] Site 10 is adjacent to petroleum site, Site 607NE. These three samples were collected during a remedial action at Site 607NE.

Notes: Total VOA = the sum concentration of benzene, toluene, ethylbenzene, and xylenes.
bdl = below detection limits.
NS = not sampled.
Total PAH = the sum concentration of PAH compounds detected by U.S. Environmental Protection Agency (USEPA) Method 8270A.
J = estimated value.
< = less than.

Confirmatory soil samples 10B00202, 10B00302, and 10B00402 were collected from 2.5 feet bls. Each soil sample was analyzed for TRPH, arsenic, cadmium, chromium, and lead, in accordance with Chapter 62-770.600, FAC. TRPH concentrations of 52.2 ppm, 34.8 ppm, and 78.7 ppm were detected in samples 10B00202, 10B00302, and 10B00402, respectively. Arsenic, cadmium, chromium, and lead concentrations were below the Florida clean soil maximum concentrations as defined in Chapter 62-775.400, FAC, and listed in "Guidelines for Assessment and Remediation of Petroleum Contaminated Soil" (FDEP, May 1994). Confirmatory sample 10B00202 was also analyzed for PAH. A total PAH concentration of 1,131 ppb was detected in soil sample 10B00202.

Because TRPH concentrations exceeded the Chapter 62-775, FAC, maximum concentration of 10 ppm, two additional soil samples were collected on the east and west sides of Site 10. No additional soil samples were collected from the south side because of the proximity of Building 607. The two additional confirmatory samples, 10B00503 and 10B00603, were analyzed for TRPH, arsenic, cadmium, chromium, and lead. TRPH concentrations in samples 10B00503 and 10B00603 exceeded the TRPH clean soil maximum concentration of 10 ppm. Arsenic, cadmium, chromium, and lead concentrations were below the State clean soil maximum concentrations (FDEP, May 1994).

On June 7, 1995, two soil samples were collected approximately 15 feet east and south of soil sample 10B00503 in an effort to delineate the areal extent of TRPH contamination at that location. The two samples, 10B00704 and 10B00804, were analyzed for TRPH, arsenic, cadmium, chromium, and lead. A TRPH concentration of 13 ppm was detected in soil sample 10B00804. All other contaminants detected in samples 10B00704 and 10B00804 were below State clean soil maximum concentrations (FDEP, May 1994).

In August and September 1995, ABB-ES personnel returned to Site 10 to collect additional soil samples south of 10B00804 and west of 10B00603. Soil samples 10B00905, 10B01005, 10B01105, and 10B01205 were analyzed only for TRPH. TRPH concentrations in each of these four soil samples were below method detection limits.

Based on the areal extent of TRPH contamination shown on Figure 2-2, an area approximately 40 feet by 15 feet and 15 feet by 18 feet on the east side of the UST excavation and an area approximately 25 feet by 30 feet on the west side of the UST excavation are both excessively contaminated. The estimated total volume of soil with excessive TRPH contamination is 270 yd^3.

2.2 GROUNDWATER ASSESSMENT RESULTS. On March 17, 1995, ABB-ES personnel supervised the installation of one permanent shallow monitoring well in the Site 10 excavation area. The monitoring well, 10G001, was installed to a depth of 12 feet bls using a rotary drilling technique and hollow stem augers. One groundwater sample was collected from monitoring well 100G001 on March 22, 1995. The groundwater sample, 10G00101, was analyzed for the used oil analytical group parameters in accordance with Chapter 62-770.600, FAC. A lead concentration of 17.9 ppb was the only contaminant detected in groundwater sample 10G00101. The State target level for lead listed in Chapter 62-770.730(5)(a), FAC, is 50 ppb. Figure 2-3 shows the location and sampling results for monitoring well 10G001.

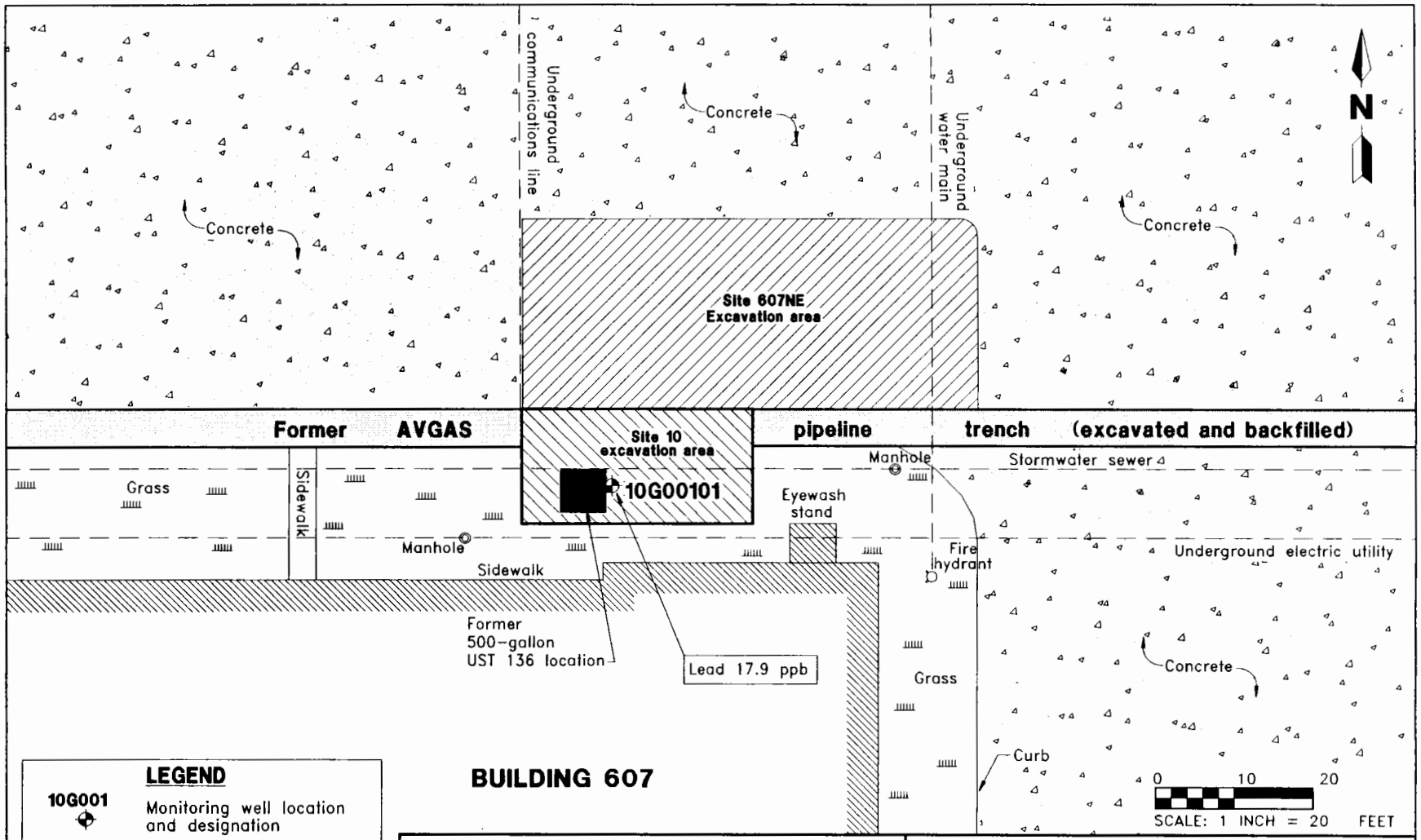

FIGURE 2-3
GROUNDWATER SAMPLE ANALYTICAL RESULTS, MARCH 22, 1995

CONTAMINATION ASSESSMENT REPORT ADDENDUM
SITE 10, UST 136

NADEP PENSACOLA
PENSACOLA, FLORIDA

3.0 SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

3.1 SUMMARY. Based on the findings of the CA field investigations and laboratory analytical results, the following is a summary of existing conditions at the site.

- Site soil consists of a mixture of fill material and very fine- to fine-grained, well-sorted sand. The sand ranges in color from very light gray to light brown. The fill material consists of cobble-size asphalt, concrete fragments, and broken porcelain artifacts.

- The source of petroleum contamination, UST 136, has been removed.

- Excessively contaminated soil from the tank excavation area was removed. No visual evidence of soil contamination was observed on the excavation walls.

- Eleven confirmatory analytical soil samples were collected from the north, west, and east sides of the UST excavation area. The TRPH concentrations exceeding the State clean soil maximum concentration of 10 ppm were detected in six soil samples. The estimated volume of excessively contaminated soil is 270 yd^3. Figure 3-1 presents the areal extent of excessively contaminated soil.

- Lead was the only contaminant detected in the groundwater sample collected from Site 10. The lead concentration of 17.9 ppb detected in sample 10G00101 is below the State target level of 50 ppb listed in Chapter 62-770.730(5)(a), FAC.

3.2 CONCLUSIONS. Based on the findings of the CA and site conditions, the following can be concluded.

- Approximately 270 yd^3 of excessively contaminated soil at Site 10 on the east and west sides of the UST excavation may be remediated as part of an IRA in accordance with Chapter 62-770.300(7), FAC.

- The groundwater at Site 10 has not been impacted by the soil contamination detected during this investigation.

3.3 RECOMMENDATIONS. Based on the findings, conclusions, and interpretations of the CA, ABB-ES recommends that excessively contaminated soil at the site be removed. An NFAP will be the appropriate recommendation for Site 10 following soil removal.

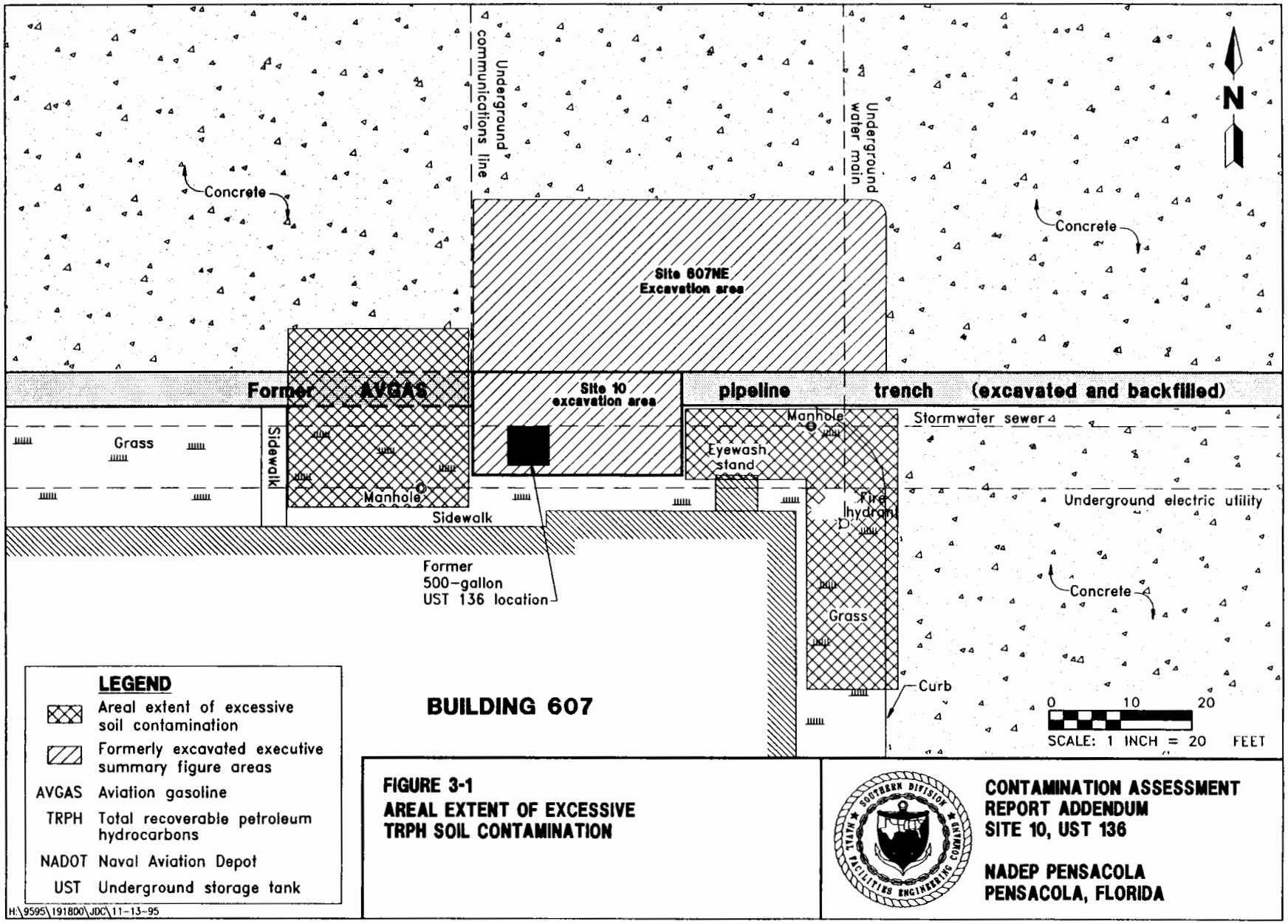

FIGURE 3-1
AREAL EXTENT OF EXCESSIVE TRPH SOIL CONTAMINATION

CONTAMINATION ASSESSMENT REPORT ADDENDUM
SITE 10, UST 136

NADEP PENSACOLA
PENSACOLA, FLORIDA

4.0 PROFESSIONAL REVIEW CERTIFICATION

This CAR addendum was prepared under the supervision of a professional geologist registered in the State of Florida using sound hydrogeologic principles and professional judgment. This assessment is based on the geologic investigation and associated information detailed in the text and appended to this report or referenced in public literature. Recommendations are based upon interpretations of the applicable regulatory requirements, guidelines, and relevant issues discussed with regulatory personnel during the site investigation. If conditions that differ from those described are determined to exist, the undersigned geologist should be notified to evaluate the effects of any additional information on this assessment or the recommendations made in this report. This CAR addendum was developed for Site 10, UST 138, at NADEP, Naval Air Station Pensacola, in Pensacola, Florida, and should not be construed to apply to any other site.

Michael J. Williams
Professional Geologist
P.G. No. 344

11/16/95
Date

REFERENCES

ABB Environmental Services, Inc., 1995, AVGAS Pipeline Area Contamination Assessment Report, August.

Florida Department of Environmental Regulation, 1994, Guidelines for Assessment and Remediation of Petroleum-Contaminated Soil, Division of Waste Management, May.

Florida Department of Transportation, 1982, Florida official transportation map.

APPENDIX A

GT ENVIRONMENTAL SERVICES CORRESPONDENCE

GT Environmental Services, Inc.

One Purlieu Place, Suite 205 • Winter Park, FL 32792 • 407/671-0125 • Fax: 407/671-2705

NAS Pensacola / Chevalier Field
Closure Assessment / October 17, 1994
GT Environmental Services, Inc

Tanks 130, 138, 140, 143 had no visual contamination. Analytical was run for lead and TRPH. Contamination was detected on all the above tanks .

Tanks Removed		Contaminated		Method of Detection
#104		Soil/Groundwater		Visual
#107		Soil/Groundwater		Visual
#110		Soil		Visual
#116		Soil		Visual
#119		Soil/Groundwater		Visual
#122		Soil		Visual
#130		Soil	TPH 57 PPM	Analytical
#134	Galv.Tank	Soil		Visual
#136				Visual
#138		Soil	TPH 540 PPM	Analytical
#140			TPH 650 PPM; Lead 10PPM	Analytical
#143		Soil	TPH 49 PPM	Analytical

Note: Soil Samples were taken at points where visual contamination appeared. (Where no visual contamination appeared samples were taken from the ends and middle of soil from underground tanks)

Note: GT Environmental Services, Inc. used an HNU P.I.D. on all tank soil. Due to the heavy oil, the P.I.D. did not pick up any volatiles. We referred to the visual detection as required by the Florida Guidelines for Contamination Assessment for Oil Tanks.

GT ENVIRONMENTAL SERVICES, INC.
One Purlieu Place, Suite 205
Winter Park, Florida 32792
(407) 671-0125
FAX (407) 671-2705

FILE

September 20, 1994

Phoenix Construction Services, Inc.
1805 Tennessee Avenue
Lynn Haven, FL 32444

Attn: Terry Wilson

RE: Fuel Tankage Project
NAS, Pensacola, FL
Contract N62467-90-C-0486

Dear Terry:

The following tanks show signs of contamination, detected by visual inspection:

Tank 107 - overspill
Tank 110 - overspill
Tank 116 - loose pipe, overspill
Tank 122 - overspill
Tank 134 - This galvanized steel tank apparently emploded underground prior to our removal.
Tank 136 - corrosion holes in bottom of tank

Should you have any questions and/or comments, please contact this writer.

Sincerely,

G T Environmental Services, Inc.

George C. Wilbur

xc: PCS
PCS/GT

APPENDIX B

LITHOLOGIC LOGS

TITLE: NADEP PENSACOLA	LOG of WELL: NA		BORING NO. 10B001
CLIENT: SOUTHDIVNAVFACENGCOM			PROJECT NO: 07527.54
CONTRACTOR: NA		DATE STARTED: 10/26/94	COMPLTD: 10/26/94
METHOD: Hand Auger	CASE SIZE: NA	SCREEN INT.: NA	PROTECTION LEVEL: D
TOC ELEV.: NA FT.	MONITOR INST.: OVA	TOT DPTH: 3.25FT.	DPTH TO ▽ FT.
LOGGED BY: P. Wagner	WELL DEVELOPMENT DATE: NA		SITE: Site 10, UST 136

DEPTH FT.	LABORATORY SAMPLE ID.	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
1					FILL: red clayey sand.		FILL		
2									
3	10B00101								
4									
5									

ABB ENVIRONMENTAL SERVICES, INC.

TITLE: NADEP PENSACOLA	LOG of WELL: NA	BORING NO. 10B002
CLIENT: SOUTHDIVNAVFACENGCOM		PROJECT NO: 07527.54
CONTRACTOR: NA	DATE STARTED: 3/13/95	COMPLTD: 3/13/95
METHOD: Hand Auger	CASE SIZE: NA	SCREEN INT.: NA	PROTECTION LEVEL: D
TOC ELEV.: NA FT.	MONITOR INST.: OVA	TOT DPTH: 2.75FT.	DPTH TO ▽ FT.
LOGGED BY: P. Wagner	WELL DEVELOPMENT DATE: NA	SITE: Site 10, UST 136

DEPTH FT.	LABORATORY SAMPLE ID.	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
1					FILL: very fine- to fine-grained sand, 10-15% silt, poorly sorted, some gravel sized asphalt fragments.		FILL		
2	10B00202								
3									
4									
5									

ABB ENVIRONMENTAL SERVICES, INC.

TITLE: NADEP PENSACOLA		LOG of WELL: NA	BORING NO. 10B003
CLIENT: NA			PROJECT NO: 07527.54
CONTRACTOR: NA		DATE STARTED: 3/13/95	COMPLTD: 3/13/95
METHOD: Hand Auger	CASE SIZE: NA	SCREEN INT.: NA	PROTECTION LEVEL: D
TOC ELEV.: NA FT.	MONITOR INST.: OVA	TOT DPTH: 2.25FT.	DPTH TO ▽ FT.
LOGGED BY: P. Wagner	WELL DEVELOPMENT DATE: NA		SITE: Site 10, UST 136

DEPTH FT.	LABORATORY SAMPLE ID.	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
1					SAND: very fine- to fine-grained, 5% silt, moderately sorted, dry, moderately brown.		SP		
2	10B00302								
3									
4									
5									

 ABB ENVIRONMENTAL SERVICES, INC.

TITLE: NADEP PENSACOLA	LOG of WELL: NA		BORING NO. 10B004
CLIENT: NA			PROJECT NO: 07527.54
CONTRACTOR: NA		DATE STARTED: 3/13/95	COMPLTD: 3/13/95
METHOD: Hand Auger	CASE SIZE: NA	SCREEN INT.: NA	PROTECTION LEVEL: D
TOC ELEV.: NA FT.	MONITOR INST.: OVA	TOT DPTH: 2.75FT.	DPTH TO ▽ FT.
LOGGED BY: P. Wagner	WELL DEVELOPMENT DATE: NA		SITE: Site 10, UST 136

DEPTH FT.	LABORATORY SAMPLE ID.	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
1					SAND: Very fine- to fine-grained, moderately sorted, dry, reddish brown.		SP		
2	10B00402								
3									
4									
5									

ABB ENVIRONMENTAL SERVICES, INC.

TITLE: NADEP PENSACOLA	LOG of WELL: NA		BORING NO. 10B005
CLIENT: NA			PROJECT NO: 07527.54
CONTRACTOR: NA		DATE STARTED: 4/12/95	COMPLTD: 4/12/95
METHOD: Hand Auger	CASE SIZE: NA	SCREEN INT.: NA	PROTECTION LEVEL: D
TOC ELEV.: NA FT.	MONITOR INST.: OVA	TOT DPTH: 2.5FT.	DPTH TO ▽ FT.
LOGGED BY: P. Wagner	WELL DEVELOPMENT DATE: NA		SITE: Site 10, UST 136

DEPTH FT.	LABORATORY SAMPLE ID.	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
1					FILL: very fine- to fine-grained sand mixed with asphalt pebbles and concrete fragments, poorly sorted, grayish brown.		FILL		
2	10B00503								
3									
4									
5									

ABB ENVIRONMENTAL SERVICES, INC.

TITLE: NADEP PENSACOLA		LOG of WELL: NA	BORING NO. 10B006
CLIENT: NA			PROJECT NO: 07527.54
CONTRACTOR: NA		DATE STARTED: 4/12/95	COMPLTD: 4/12/95
METHOD: Hand Auger	CASE SIZE: NA	SCREEN INT.: NA	PROTECTION LEVEL: D
TOC ELEV.: NA FT.	MONITOR INST.: OVA	TOT DPTH: 3FT.	DPTH TO ▽ FT.
LOGGED BY: P. Wagner	WELL DEVELOPMENT DATE: NA		SITE: Site 10, UST 136

DEPTH FT.	LABORATORY SAMPLE ID.	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
1					FILL: very fine- to fine-grained sand with asphalt pebbles, poorly sorted, reddish orange.		FILL		
2									
3	10B00603								
4									
5									

 ABB ENVIRONMENTAL SERVICES, INC.

TITLE: NADEP PENSACOLA		LOG of WELL: NA	BORING NO. 10B007
CLIENT: NA			PROJECT NO: 07527.54
CONTRACTOR: NA		DATE STARTED: 6/7/95	COMPLTD: 6/7/95
METHOD: Hand Auger	CASE SIZE: NA	SCREEN INT.: NA	PROTECTION LEVEL: D
TOC ELEV.: NA FT.	MONITOR INST.: OVA	TOT DPTH: 3.25FT.	DPTH TO ▽ FT.
LOGGED BY: P. Wagner	WELL DEVELOPMENT DATE: NA		SITE: Site 10, UST 136

DEPTH FT.	LABORATORY SAMPLE ID.	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
1					FILL: fine-grained sand, sand sized asphalt, cobble size brick fragments.		FILL		
2					FILL: fine-grained, well sorted sand, trace asphalt, light gray.				
3	10B00704								
4									
5									

 ABB ENVIRONMENTAL SERVICES, INC.

TITLE: NADEP PENSACOLA	LOG of WELL: NA	BORING NO. 10B008
CLIENT: NA		PROJECT NO: 07527.54
CONTRACTOR: NA	DATE STARTED: 6/7/95	COMPLTD: 6/7/95
METHOD: Hand Auger	CASE SIZE: NA	SCREEN INT.: NA	PROTECTION LEVEL: D
TOC ELEV.: NA FT.	MONITOR INST.: OVA	TOT DPTH: 3.75FT.	DPTH TO ▽ FT.
LOGGED BY: P. Wagner	WELL DEVELOPMENT DATE: NA	SITE: Site 10, UST 136

DEPTH FT.	LABORATORY SAMPLE ID.	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
1					FILL: very fine- to fine-grained sand, moderately sorted, some concrete fragments, trace asphalt and oyster shells, yellowish brown.		SP		
2							SP		
3	10B00804				SAND: fine-grained, well sorted, light gray.				
4									
5									

ABB ENVIRONMENTAL SERVICES, INC.

TITLE: NADEP PENSACOLA	LOG of WELL: NA		BORING NO. 10B009
CLIENT: NA			PROJECT NO: 07527.54
CONTRACTOR: NA		DATE STARTED: 8/8/95	COMPLTD: 8/8/95
METHOD: Hand Auger	CASE SIZE: NA	SCREEN INT.: NA	PROTECTION LEVEL: D
TOC ELEV.: NA FT.	MONITOR INST.: OVA	TOT DPTH: 3FT.	DPTH TO ▽ FT.
LOGGED BY: P. Wagner	WELL DEVELOPMENT DATE: NA		SITE: Site 10, UST 136

DEPTH FT.	LABORATORY SAMPLE ID.	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
1					FILL: fine- to medium-grained sand, poorly sorted, dry, light brown to orange, no odor, some small asphalt fragments.		FILL		
2									
3	10B00905								
4									
5									

ABB ENVIRONMENTAL SERVICES, INC.

TITLE: NADEP PENSACOLA		LOG of WELL: NA	BORING NO. 10B010
CLIENT: NA			PROJECT NO: 07527.54
CONTRACTOR: NA		DATE STARTED: 8/8/95	COMPLTD: 8/8/95
METHOD: Hand Auger	CASE SIZE: NA	SCREEN INT.: NA	PROTECTION LEVEL: D
TOC ELEV.: NA FT.	MONITOR INST.: OVA	TOT DPTH: 3FT.	DPTH TO ▽ FT.
LOGGED BY: P. Wagner	WELL DEVELOPMENT DATE: NA		SITE: Site 10, UST 136

DEPTH FT.	LABORATORY SAMPLE ID.	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
1					FILL: fine-grained sand, well sorted, dry, light brown, no odor, some medium size asphalt grains.		FILL		
					ASPHALT		Asphalt		
2					FILL: fine-grained sand, well sorted, dry, light brown, no odor, some medium size asphalt grains.		FILL		
3	10B01005								
4									
5									

ABB ENVIRONMENTAL SERVICES, INC.

TITLE: NADEP PENSACOLA		LOG of WELL: NA	BORING NO. 10B011
CLIENT: NA			PROJECT NO: 07527.54
CONTRACTOR: NA		DATE STARTED: 9/5/95	COMPLTD: 9/5/95
METHOD: Hand Auger	CASE SIZE: NA	SCREEN INT.: NA	PROTECTION LEVEL: D
TOC ELEV.: NA FT.	MONITOR INST.: OVA	TOT DPTH: 3FT.	DPTH TO ▽ FT.
LOGGED BY: P. Wagner	WELL DEVELOPMENT DATE: NA		SITE: Site 10, UST 136

DEPTH FT.	LABORATORY SAMPLE ID.	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
1					FILL: fine-grained sand, well sorted, dry, light gray.		FILL		
					Coal, Fill Material		Coal		
2							SP		
					SAND: fine-grained, well sorted, dry, light gray.				
	10B01105								
3									
4									
5									

ABB ENVIRONMENTAL SERVICES, INC.

TITLE: NADEP PENSACOLA	LOG of WELL: NA	BORING NO. 10B012
CLIENT: NA		PROJECT NO: 07527.54
CONTRACTOR: NA	DATE STARTED: 9/5/95	COMPLTD: 9/5/95
METHOD: Hand Auger	CASE SIZE: NA	SCREEN INT.: NA	PROTECTION LEVEL: D
TOC ELEV.: NA FT.	MONITOR INST.: OVA	TOT DPTH: 3FT.	DPTH TO ▽ FT.
LOGGED BY: P. Wagner	WELL DEVELOPMENT DATE: NA	SITE: Site 10, UST 136

DEPTH FT.	LABORATORY SAMPLE ID.	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
1					FILL: fine-grained sand, well sorted, dry, light gray.		FILL		
					Asphalt		Asphalt		
2							SP		
					SAND: fine-grained, well sorted, dry, light gray.				
	10B01205								
3									
4									
5									

ABB ENVIRONMENTAL SERVICES, INC.

TITLE: NADEP Pensacola AVGAS Pipeline Area		LOG of WELL: 10G001	BORING NO. NA
CLIENT: SOUTHNAVFACENGCOM			PROJECT NO: 7527.54
CONTRACTOR: Groundwater Protection, Inc.		DATE STARTED: 3/17/95	COMPLTD: 3/17/95
METHOD: 4.25" ID HSA	CASE SIZE: 2-inch	SCREEN INT.: 2'-12'	PROTECTION LEVEL: D
TOC ELEV.: NM FT.	MONITOR INST.: OVA	TOT DPTH: 12FT.	DPTH TO ▽ FT.
LOGGED BY: P. Wagner	WELL DEVELOPMENT DATE: 3/17/95		SITE: 10, UST 136

DEPTH FT.	LABORATORY SAMPLE ID.	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					FILL: red clayey sand.		FILL		
5					SAND: fine-grained, well sorted, damp to saturated, light gray.		SP		
10									
15									

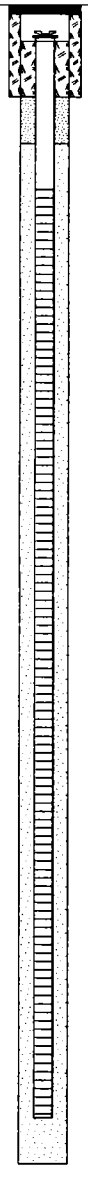

ABB ENVIRONMENTAL SERVICES, INC.

APPENDIX C

LABORATORY ANALYTICAL DATA

NADEP AVGAS PIPELINE SITE 10

Subsurface Soil and Groundwater -- Volatiles and Semivolatiles

Lab Sample Number:	B4J2700400				B5C2300570			
Site	NADEP-10				NADEP-10			
Locator	10B00101				10G00101			
Collect Date:	26-OCT-94				22-MAR-95			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
GC/MS Volatiles								
Acrolein	54	U	ug/kg	54	10	U	ug/l	10
Acrylonitrile	54	U	ug/kg	54	10	U	ug/l	10
Benzene	5.4	U	ug/kg	5.4	1	U	ug/l	1
Bromodichloromethane	5.4	U	ug/kg	5.4	1	U	ug/l	1
Bromoform	5.4	U	ug/kg	5.4	1	U	ug/l	1
Bromomethane	5.4	U	ug/kg	5.4	1	U	ug/l	1
Carbon tetrachloride	5.4	U	ug/kg	5.4	1	U	ug/l	1
Chlorobenzene	5.4	U	ug/kg	5.4	1	U	ug/l	1
Dibromochloromethane	5.4	U	ug/kg	5.4	1	U	ug/l	1
Chloroethane	5.4	U	ug/kg	5.4	1	U	ug/l	1
2-Chloroethyl vinyl ether	5.4	U	ug/kg	5.4	1	U	ug/l	1
Chloroform	5.4	U	ug/kg	5.4	1	U	ug/l	1
Chloromethane	5.4	U	ug/kg	5.4	1	U	ug/l	1
1,2-Dichlorobenzene	5.4	U	ug/kg	5.4	10	U	ug/l	10
1,3-Dichlorobenzene	1800	U	ug/kg	1800	1	U	ug/l	1
1,4-Dichlorobenzene	5.4	U	ug/kg	5.4	1	U	ug/l	1
1,1-Dichloroethane	5.4	U	ug/kg	5.4	1	U	ug/l	1
1,2-Dichloroethane	5.4	U	ug/kg	5.4	1	U	ug/l	1
1,1-Dichloroethene	5.4	U	ug/kg	5.4	1	U	ug/l	1
cis-1,2-Dichloroethene	5.4	U	ug/kg	5.4	1	U	ug/l	1
trans-1,2-Dichloroethene	5.4	U	ug/kg	5.4	1	U	ug/l	1
1,2-Dichloropropane	5.4	U	ug/kg	5.4	1	U	ug/l	1
cis-1,3-Dichloropropene	5.4	U	ug/kg	5.4	1	U	ug/l	1
trans-1,3-Dichloropropene	5.4	U	ug/kg	5.4	1	U	ug/l	1
Ethylbenzene	5.4	U	ug/kg	5.4	1	U	ug/l	1
Trichlorofluoromethane	5.4	U	ug/kg	5.4	1	U	ug/l	1
Methylene chloride	5.4	U	ug/kg	5.4	1	U	ug/l	1
1,1,2,2-Tetrachloroethane	5.4	U	ug/kg	5.4	1	U	ug/l	1
Tetrachloroethene	5.4	U	ug/kg	5.4	1	U	ug/l	1
Toluene	5.4	U	ug/kg	5.4	1	U	ug/l	1
1,1,1-Trichloroethane	5.4	U	ug/kg	5.4	1	U	ug/l	1
1,1,2-Trichloroethane	5.4	U	ug/kg	5.4	1	U	ug/l	1
Trichloroethene	5.4	U	ug/kg	5.4	1	U	ug/l	1
Vinyl chloride	5.4	U	ug/kg	5.4	1	U	ug/l	1
Xylenes (total)	5.4	U	ug/kg	5.4	1	U	ug/l	1
GC/MS Semi-Volatiles II								
Acenaphthene	1800	U	ug/kg	1800	10	U	ug/l	10
Acenaphthylene	1800	U	ug/kg	1800	10	U	ug/l	10
Anthracene	1800	U	ug/kg	1800	10	U	ug/l	10
Benzidine	9100	U	ug/kg	9100	50	U	ug/l	50
Benzo (a) anthracene	1800	U	ug/kg	1800	10	U	ug/l	10
Benzo (b) fluoranthene	420	J	ug/kg	1800	10	U	ug/l	10
Benzo (k) fluoranthene	450	J	ug/kg	1800	10	U	ug/l	10
Benzo (g,h,i) perylene	650	J	ug/kg	1800	10	U	ug/l	10
Benzo (a) pyrene	1800	U	ug/kg	1800	10	U	ug/l	10
Bis(2-chloroethoxy)methane	1800	U	ug/kg	1800	10	U	ug/l	10
Bis(2-chloroethyl)ether	1800	U	ug/kg	1800	10	U	ug/l	10
Bis(2-chloroisopropyl)ether	1800	U	ug/kg	1800	10	U	ug/l	10
Bis(2-ethylhexyl)phthalate	1800	U	ug/kg	1800	10	U	ug/l	10

NADEP AVGAS PIPELINE SITE 10
Subsurface Soil and Groundwater -- Volatiles and Semivolatiles

Lab Sample Number:	B4J2700400				B5C2300570				
Site	NADEP-10				NADEP-10				
Locator	10B00101				10G00101				
Collect Date:	26-OCT-94				22-MAR-95				
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	
4-Bromophenyl phenyl ether	1800	U	ug/kg	1800	10	U	ug/l	10	
Butyl benzyl phthalate	1800	U	ug/kg	1800	10	U	ug/l	10	
2-Chloronaphthalene	1800	U	ug/kg	1800	10	U	ug/l	10	
2-Chlorophenol	1800	U	ug/kg	1800	10	U	ug/l	10	
4-Chlorophenyl phenyl ether	1800	U	ug/kg	1800	10	U	ug/l	10	
Chrysene	430	J	ug/kg	1800	10	U	ug/l	10	
Dibenzo (a,h) anthracene	1800	U	ug/kg	1800	10	U	ug/l	10	
Di-n-butyl phthalate	1800	U	ug/kg	1800	10	U	ug/l	10	
1,2-Dichlorobenzene	5.4	U	ug/kg	5.4	10	U	ug/l	10	
1,3-Dichlorobenzene	1800	U	ug/kg	1800	1	U	ug/l	1	
1,4-Dichlorobenzene	5.4	U	ug/kg	5.4	1	U	ug/l	1	
3,3'-Dichlorobenzidine	9100	U	ug/kg	9100	50	U	ug/l	50	
2,4-Dichlorophenol	1800	U	ug/kg	1800	10	U	ug/l	10	
Diethyl phthalate	1800	U	ug/kg	1800	10	U	ug/l	10	
2,4-Dimethylphenol	1800	U	ug/kg	1800	10	U	ug/l	10	
Dimethyl phthalate	1800	U	ug/kg	1800	10	U	ug/l	10	
Di-n-octyl phthalate	1800	U	ug/kg	1800	10	U	ug/l	10	
2,4-Dinitrophenol	9100	U	ug/kg	9100	50	U	ug/l	50	
2,4-Dinitrotoluene	1800	U	ug/kg	1800	10	U	ug/l	10	
2,6-Dinitrotoluene	1800	U	ug/kg	1800	10	U	ug/l	10	
Fluoranthene	450	J	ug/kg	1800	10	U	ug/l	10	
Fluorene	1800	U	ug/kg	1800	10	U	ug/l	10	
Hexachlorobenzene	1800	U	ug/kg	1800	10	U	ug/l	10	
Hexachlorocyclopentadiene	1800	U	ug/kg	1800	10	U	ug/l	10	
Hexachloroethane	1800	U	ug/kg	1800	10	U	ug/l	10	
Indeno(1,2,3-cd)pyrene	460	J	ug/kg	1800	10	U	ug/l	10	
Isophorone	1800	U	ug/kg	1800	10	U	ug/l	10	
Naphthalene	1800	U	ug/kg	1800	10	U	ug/l	10	
Nitrobenzene	1800	U	ug/kg	1800	10	U	ug/l	10	
2-Nitrophenol	1800	U	ug/kg	1800	10	U	ug/l	10	
4-Nitrophenol	9100	U	ug/kg	9100	50	U	ug/l	50	
N-Nitrosodimethylamine	1800	U	ug/kg	1800	10	U	ug/l	10	
N-Nitrosodi-n-propylamine	1800	U	ug/kg	1800	10	U	ug/l	10	
N-Nitrosodiphenylamine	1800	U	ug/kg	1800	10	U	ug/l	10	
Pentachlorophenol	9100	U	ug/kg	9100	50	U	ug/l	50	
Phenanthrene	1800	U	ug/kg	1800	10	U	ug/l	10	
Phenol	440	J	ug/kg	1800	10	U	ug/l	10	
Pyrene	1800	U	ug/kg	1800	10	U	ug/l	10	
1,2,4-Trichlorobenzene	1800	U	ug/kg	1800	10	U	ug/l	10	
2,4,6-Trichlorophenol	1800	U	ug/kg	1800	10	U	ug/l	10	
Hexachlorobutadiene	1800	U	ug/kg	1800	10	U	ug/l	10	

U = Not Detected J = Estimated Value

NADEP AVGAS PIPELINE SITE 10
Subsurface Soil and Groundwater -- Total Metals

Lab Sample Number:	B4J2700400			B5C1400170			B5C1400170			B5C1400170				
Site	NADEP-10			NADEP-10			NADEP-10			NADEP-10				
Locator	10B00101			10B00202			10B00202-D			10B00302				
Collect Date:	26-OCT-94			13-MAR-95			13-MAR-95			13-MAR-95				
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
TOTAL METALS																
Cadmium	.49	J	mg/kg	.5	.6		mg/kg	.55	.54	U	mg/kg	.54	1.5		mg/kg	.53
Chromium	19.1		mg/kg	2.5	9.9		mg/kg	2.7	9.9		mg/kg	2.7	47.9		mg/kg	2.6
Arsenic	1		mg/kg	.25	3		mg/kg	.27	2.7		mg/kg	.27	.89		mg/kg	.26
Lead	62		mg/kg	10	79.3		mg/kg	2.7	85.1		mg/kg	2.7	67.7		mg/kg	2.6

U = Not Detected J = Estimated Value

NADEP AVGAS PIPELINE SITE 10
Subsurface Soil and Groundwater -- Total Metals

	Lab Sample Number:	B5C1400170			B5D1400490			B5D1400490			B5D1400490		
	Site	NADEP-10			NADEP-10			NADEP-10			NADEP-10		
	Locator	10B00402			10B00503			10B00603			10B00603D		
	Collect Date:	13-MAR-95			12-APR-95			12-APR-95			12-APR-95		
		VALUE QUAL	UNITS	DL	VALUE QUAL	UNITS	DL	VALUE QUAL	UNITS	DL	VALUE QUAL	UNITS	DL
TOTAL METALS													
Cadmium		.65	mg/kg	.53	.53 U	mg/kg	.53	.52 U	mg/kg	.52	.53 U	mg/kg	.53
Chromium		15.7	mg/kg	2.6	3.3	mg/kg	2.6	3.6	mg/kg	2.6	2.6 U	mg/kg	2.6
Arsenic		1.1	mg/kg	.26	2.8	mg/kg	.26	.78	mg/kg	.26	.6	mg/kg	.26
Lead		24.5	mg/kg	2.6	17.5	mg/kg	2.6	11.2	mg/kg	2.6	11.6	mg/kg	2.6

U = Not Detected J = Estimated Value

NADEP AVGAS PIPELINE SITE 10
Subsurface Soil and Groundwater -- Total Metals

Lab Sample Number:	B5F0801130				B5F0801130				B5F0801130				B5C2300570			
Site	NADEP-10				NADEP-10				NADEP-10				NADEP-10			
Locator	10B00704				10B00804				10B0EB04				10G00101			
Collect Date:	07-JUN-95				07-JUN-95				07-JUN-95				22-MAR-95			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
TOTAL METALS																
Cadmium	.52	U	mg/kg	.52	.52	U	mg/kg	.52	5	U	ug/l	5	5	U	ug/l	5
Chromium	2.6	U	mg/kg	2.6	2.6	U	mg/kg	2.6	50	U	ug/l	50	50	U	ug/l	50
Arsenic	10	U	mg/kg	10	10	U	mg/kg	10	300	U	ug/l	300	5	U	ug/l	5
Lead	2.8		mg/kg	2.6	11.3		mg/kg	2.6	50	U	ug/l	50	17.9		ug/l	5

U = Not Detected J = Estimated Value

NADEP AVGAS PIPELINE SITE 10

Subsurface Soil and Groundwater -- Total Petroleum Hydrocarbons

Lab Sample Number:		B4J2700400			B5C1400170			B5C1400170			B5C1400170		
Site		NADEP-10			NADEP-10			NADEP-10			NADEP-10		
Locator		10B00101			10B00202			10B00202-D			10B00302		
Collect Date:		26-OCT-94			13-MAR-95			13-MAR-95			13-MAR-95		
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
TRPH																
Total petroleum hydrocarbons	138		mg/kg	5.4	52.2		mg/kg	5.5	41.7		mg/kg	5.4	34.8		mg/kg	5.3

U = Not Detected J = Estimated Value

NADEP AVGAS PIPELINE SITE 10
Subsurface Soil and Groundwater -- Total Petroleum Hydrocarbons

Lab Sample Number:	B5C1400170			B5D1400490			B5D1400490			B5D1400490		
Site	NADEP-10			NADEP-10			NADEP-10			NADEP-10		
Locator	10B00402			10B00503			10B00603			10B00603D		
Collect Date:	13-MAR-95			12-APR-95			12-APR-95			12-APR-95		
	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL
TRPH												
Total petroleum hydrocarbons	78.7	mg/kg	5.3	10.6	mg/kg	5.3	25.6	mg/kg	5.2	18.5	mg/kg	5.3

U = Not Detected J = Estimated Value

NADEP AVGAS PIPELINE SITE 10
Subsurface Soil and Groundwater -- Total Petroleum Hydrocarbons

Lab Sample Number:	B5F0801130				B5F0801130				B5H0901110				B5H0901110			
Site	NADEP-10				NADEP-10				NADEP-10				NADEP-10			
Locator	10B00704				10B00804				10B00905				10B01005			
Collect Date:	07-JUN-95				07-JUN-95				08-AUG-95				08-AUG-95			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
TRPH																
Total petroleum hydrocarbons	5.8		mg/kg	5.2	13		mg/kg	5.2	5.2	U	mg/kg	5.2	5.2	U	mg/kg	5.2

U = Not Detected J = Estimated Value

NADEP AVGAS PIPELINE SITE 10
Subsurface Soil and Groundwater -- Total Petroleum Hydrocarbons

Lab Sample Number:	B5I0601040				B5I0601040				B5I0601040				B5F0801130			
Site	NADEP-10				NADEP-10				NADEP-10				NADEP-10			
Locator	10B01105				10B01105D				10B01205				10B0EB04			
Collect Date:	05-SEP-95				05-SEP-95				05-SEP-95				07-JUN-95			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
TRPH																
Total petroleum hydrocarbons	5.2	U	mg/kg	5.2	5.2	U	mg/kg	5.2	5.1	U	mg/kg	5.1	1	U	mg/l	1

U = Not Detected J = Estimated Value

NADEP AVGAS PIPELINE SITE 10

Subsurface Soil and Groundwater -- Total Petroleum Hydrocarbons

Lab Sample Number:	B5C2300570
Site	NADEP-10
Locator	10G00101
Collect Date:	22-MAR-95

	VALUE	QUAL	UNITS	DL
TRPH				
Total petroleum hydrocarbons	1	U	mg/l	1

U = Not Detected J = Estimated Value

NADEP AVGAS PIPELINE SITE 10

Subsurface Soil -- Modified Polynuclear Aromatic Hydrocarbons

Lab Sample Number:	B5F2401010
Site	NADEP-10
Locator	10B00203
Collect Date:	22-JUN-95

	VALUE	QUAL	UNITS	DL
Modified PAH's				
Acenaphthene	100	U	ug/kg	100
Acenaphthylene	200	U	ug/kg	200
Anthracene	100	U	ug/kg	100
Benzo(a)anthracene	82		ug/kg	10
Benzo(a)pyrene	210		ug/kg	10
Benzo(b)fluoranthene	150		ug/kg	10
Benzo(ghi)perylene	100		ug/kg	10
Benzo(k)fluoranthene	110		ug/kg	10
Chrysene	79		ug/kg	10
Dibenz(a,h)anthracene	10	U	ug/kg	10
Fluoranthene	130		ug/kg	10
Fluorene	100	U	ug/kg	100
Indeno(1,2,3-cd)pyrene	140		ug/kg	10
1-Methylnaphthalene	100	U	ug/kg	100
2-Methylnaphthalene	100	U	ug/kg	100
Naphthalene	100	U	ug/kg	100
Phenanthrene	100	U	ug/kg	100
Pyrene	130		ug/kg	10

U = Not Detected J = Estimated Value